DOCUMENT RESUME

ED 058 913 LI 003 419

AUTHOR Moore, Lorna; And Others
TITLE Distinction is All; NTIS From a Technical Librarian's Point-of-View.
INSTITUTION Committee on Information Hang-ups, Washington, D.C.
PUB DATE Nov 71
NOTE 10p.; (3 References)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Evaluation; Government Publications; Information Centers; Information Networks; Information Processing; *Information Retrieval; *Information Services; *Information Systems; National Programs; *Use Studies
IDENTIFIERS *National Technical Information Service; NTIS; Scientific and Technical Information

ABSTRACT

Difficulties encountered by users of the National Technical Information Service (NTIS) idexing and abstracting services are: (1) coverage too broad for a single index, (2) duplication of material indexed or distributed elsewhere, (3) multiple number series, (4) inconsistency of bibliographic entries and (5) coverage unpredictable. The difficulties encountered in NTIS are symptomatic of problems in the entire government information system. Significant improvements in the system as a whole, or in NTIS as a part of that system, can only be accomplished by significant changes in the handling of government sponsored publications. It is proposed that all government research reports be processed and indexed by a network of information centers and that these centers feed their documents and bibliographic tapes into NTIS. It is further proposed that NTIS become the national distribution center for all unrestricted research reports and that it be responsible for the printing and distribution of separate indexes to these reports. To accomplish this, NTIS must make major changes; its relationship to the rest of the Federal information community must be restructured; and it must act as the cohesive core of a network. (Author/NH)

ED 058913

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

DISTINCTION IS ALL

NTIS from a Technical Librarian's Point-of-View

The
Document Procurement Subcommittee
of
The Committee on Information Hang-ups
Washington, D.C.

Lorna Moore, TRW Systems, Chairman
Eva Liberman, Naval Ordnance Laboratory
Regina Nellor, Institute for Defense Analyses
Joan Sweeney, Vitro Laboratories

November, 1971

LI 003 419

In recent years, the development of the traditional secondary services has been characterized by growth in size as well as number, increasing costs and financial pressures on their users, and a particularly pronounced expansion in federally operated services. Knowledge of the nature and composition of the user population of such services and of changes in this population also is increasing. Further, there is growing recognition of the librarian or information specialist as an important middleman in the flow of information from originator to consumer. In their efforts to provide the information required by the researchers they serve, these information specialists depend heavily on secondary publications and services. In many cases, they are the target audiences for such services, since they possess the special experience which enables them to exploit these resources more fully than could the researchers themselves.

Scientific and Technical Communication; a Pressing National Problem and Recommendations for its Solution (Washington, D.C.: National Academy of Sciences, 1969), p.131.

As a subcommittee of the Committee on Information Hang-ups, we were asked by NTIS, in October 1971, to take a look at NTIS with an eye to suggesting ways of cutting their operating costs. We are taking this opportunity, as users, to contribute our ideas before cost-reduction changes are made.

Difficulties encountered with the NTIS indexing and abstracting services are so great as to discourage their use. The reasons for this are the following:

a) Coverage too broad for a single index

b) Duplication of material indexed or distributed elsewhere

c) Multiple number series

d) Inconsistency of bibliographic entries

e) Coverage unpredictable.

We see no way, as NTIS is constituted now, for substantial savings to be made by <u>small</u> changes in NTIS operating procedures and services. Changes made for the sole purpose of cutting costs would simply add to retrieval costs elsewhere. Increasing the existing inefficiency and complexity by cutting back on services would cost the user more in time and manpower. The U.S. Government is a major user of NTIS services, either directly or through contractors. Increasing the cost of using NTIS ultimately only increases the cost of operating NTIS.

Among all the secondary publications a librarian must use, GRA/GRI is the one in which we have the least confidence. We do not know

what is in it or what is not in it. Contents are not limited by subject or source, nor identified by a unique numbering system; and there is duplication of material indexed elsewhere. Searching and ordering procedures are therefore tedious and time consuming.

The inclusion of AD, NASA N-, and AEC numbers has added to the confusion. We once knew where to find these reports. Now we must search three overlapping indexes. Equal uncertainty is caused by overlapping functions. We do not know who is responsible for indexing and announcing specific reports. Why must we go to TAB, and GRI, and the USGPO Monthly Catalog to locate an Army Area Handbook?

The use of computer tapes from other information centers, as NTIS now uses them, makes an index that is too big and too inconsistent in bibliographic form. Five corporate author headings for one facility, where a single heading would do, tax the patience of the user. The sheer bulk of the indexes not only creates, but magnifies the importance of small errors, inconsistencies, and omissions.

A large part of library work is retrospective searching: verifying, locating and acquiring items about which one or more bibliographic identifiers is known. An equally significant function is searching by subject, for which the same indexes serve. Because we must identify specific documents out of a staggering multiplicity of publications, we must know in each case which index to use. For this reason, secondary services should be distinct and recognizable by scope of coverage. Effective indexes must have defined scope because users have defined needs.

Indexes should be offered to users in distinct sets of scientific disciplines, coherent subject areas, mission-related, or source-related material. Each set should be small enough to be recognizable and large enough to make an index necessary. It is the obligation of information system designers so to structure their indexes.

Having done this, it is their obligation to create workable systems within the sets. "A system is an ordered, consistent, predictable way of accomplishing a desired end -- order and consistency in systems give rise to predictability, which, in turn, gives rise to dependability and efficient use."*

After all the excellent format improvements recently made in GRA and GRI they are still unpredictable, undependable and inefficient, because they reflect an undefinable collection of material.

The introduction to each GRA reads: "...includes business and economic data as well as scientific and technical report literature... announces information released to the public by U.S. Government Departments and Agencies. U.S. Government sponsored translations and some reports written in foreign languages are included." Further, "It is published...to simplify and improve public access to Federal publications and data files." This is a modest claim. NTIS does not think of its indexing journals as the sort of systematic tools that librarians are seeking. Moreover, NTIS seems to have no authority over its coverage. More and more diverse material finds its way into

---

*Saul Herner, "System Design, Evaluation and Costing -- in Plain English," presented at ADI, Central Ohio Chapter, Institute on Information Science (December 15, 1966) (AD-657 788).

GRA/GRI. NTIS is inheriting the job of organizing an unselected rapidly growing mass of unrelated material. This is the reason for the inconsistencies of the indexes.

And although the coverage is already too broad for a single secondary publication, there are more government sponsored reports outside the system than in it.

COSATI studies and others have long agreed upon the desirability of an integrated national network for information and document handling; but we are moving toward a national service that seems quite unplanned, with NTIS handling, as best it can, whatever comes its way, just as the USGPO has done for years.*

There is no reason why NTIS should not film, store, and sell all the unrestricted U.S. Government sponsored research reports, translations, and technical journals, and also supply all the secondary services for them. But having a single collection, storage, and distribution point for all items does not mean that as information everything must be indexed in a single publication. The abstract and index journals for each distinct group of reports should be separate, self-sufficient units, with formats similar (for economy in printing and storage) but distinguishable by color and subtitle. Users could subscribe to all of them or only the ones needed.

The publication of distinct indexes would eliminate a major weakness in the present GRA/GRI; each set of indexes would have its

---

*Heaven help us, there is talk of combining USGPO and NTIS indexes. The functions of these two agencies should be made more distinct, not less.

own unique numbering system with inclusive series of numbers printed on the spines of the volumes. There would be predictable sets to approach for searching. Adequate subject indexing would be assured because the terms would be selected within a consistent frame of reference by subject specialists. It would be easier to provide adequate internal "see" references. Alphanumeric ordering and other computer manipulation of the bibliographic entries would be simplified. It would not be necessary for the user to try to find his material among a mass of unrelated entries.

This could be accomplished if NTIS, as the core of a national network, were to print separate abstract and index journals directly from the tapes supplied by the information centers of those departments and agencies producing or funding research reports. DDC, NASA, and AEC unclassified announcement and index journals could be issued by NTIS as three separate secondary services. The same could be done for the other large, recognizably distinct groups such as transportation, with all the DOT funded reports and those produced and indexed by such centers of competence as the Highway Research Board; or all the reports generated by EPA's now scattered programs.

These specialized information centers and their sets of information would fall into areas much broader than, and unlike, the COSATI fields that currently have meaning to NTIS indexers, but have never been of much help to users.

The separate secondary services would correspond, in content covered, to the various functions of the Federal Government. This is both logical and workable, because users' needs also correspond

to those functions. However, it is important that overlapping or redundant functions, common enough among the government agencies, not be repeated in the indexes to the literature. In other words, the function of the specific research, the purpose of the report, should dictate which group of information specialists indexes it, and into which secondary publication it falls.

Most of the document handling information centers that could supply such tapes to NTIS are already in existence, or are planned. Although a goal for the future should certainly be compatibility of the entire system, it would not be too difficult, in the meantime, to achieve compatibility within each set.

The present mail-order catalog orientation, adopted by NTIS in an effort to cope with its problems, will, if continued, grow less efficient and more expensive. With the ever-increasing flood of documents we need a really effective national technical information service.

CONCLUSION

> It is extremely difficult, tedious and expensive for libraries to acquire publications sponsored by any level of government. The situation is aggravated by the fact that the existence of many government documents is concealed -- not through intent, but through lack of effective secondary depository apparatus. A detailed study of this problem is an indispensible prerequisite for any plan that aims to accomplish marked improvements in a nation-wide information transfer system involving government documents.*

Documents are so concealed that the cost to the government of acquiring them, against the number of titles sold, must be alarming. Because no one can agree on an ideal way to handle our immense information problem, it is not really being handled at all. USGPO and NTIS are taking over by default. Once all of the unindexed material gets into these facilities it is too late for anybody to organize it effectively.

The difficulties we encounter in NTIS are symptomatic of problems in the entire government information system. Significant improvements in the system as a whole, or in NTIS as a part of that system, can only be accomplished by significant changes in the handling of government sponsored publications.

We propose that all government research reports be processed and indexed by a network of information centers and that these centers feed their documents and their bibliographic tapes into NTIS. We

---

*Bernard C. Fry, et.al., "A Research Design for a Comprehensive Study of the Use, Bibliographic Control and Distribution of Government Publications," Indiana University, Graduate Library School, Bloomington, Indiana (1970).

propose that NTIS become the national distribution center for all unrestricted research reports and that it be responsible for the printing and distribution of separate indexes to those reports.

To accomplish this, NTIS must make major changes. Merely to expand is not enough. Increasing the size of an inefficient system would only increase its inefficiency.

The relationship of NTIS to the rest of the Federal information community must be restructured. It cannot remain a passive receptacle, but must act as the cohesive core of a network. With the publication of distinct functional indexes printed from the tapes produced by this network, NTIS would provide a national technical information service.